

**Classification:** Natural Resources Engineer - Advanced

**Working Title:** Facilities and Lands Engineer

**Location:** Fitchburg

**POSITION SUMMARY:**

**[Position Specific Information & Responsibilities]**

This position serves as a project engineer in the Engineering and Construction Management Section in the Bureau of Facilities and Lands. Duties will include budgeting, planning, design, design oversight, and project and construction management of DNR facilities. The position will act independently as the Owner's Representative for construction contract purposes and as the Agency Representative, or the liaison, with the Project Manager assigned by the Department of Administration.

The position will manage the design and direct the construction of assigned and/or delegated projects by coordinating the work of the Project Architect/Engineer and Owner/Agency staff, or act as the said Architect/Engineer as necessary. This position will ensure that the construction of DNR facilities are completed in accordance with all applicable laws, codes, statutes, administrative requirements, approved programs, schedules and budgets. Typical projects include trails, buildings, waste water systems, water supply systems, privies, piers, boat launches, bridges, exterior/interior facility repairs, pavements and parking lots, towers, campgrounds and projects related to natural resource programs.

**[Team/Section Specific Information]**

Under the general supervision of an Area Engineering Supervisor in the Engineering and Construction Management Section, the incumbent functions with a high degree of independence within the framework of laws, rules and general policy of the Department and State. The Engineering and Construction Management Section is responsible for providing efficient project management services to stakeholders including divisions, contractors and consultants for a wide range of multidiscipline projects. Additionally, the incumbent has engineering responsibilities which requires tact and sound judgement contact with the public, private officials, and architectural/engineering consultants on highly sensitive and complex engineering reviews.

**LOCATION, GEOGRAPHIC SCOPE & TRAVEL REQUIREMENTS**

This position is responsible for implementing department engineering and construction projects primarily within an assigned region with some statewide project management responsibilities, as directed by the supervisor or department leadership. Travel within the assigned region will be frequent, with occasional travel to other locations of the state for meetings/conferences and training. Occasional overnight travel may be required.

**SCOPE OF AUTHORITY:**

The position is responsible for all aspects of assigned DNR capital development work, from project program review to construction management and project closeout. Position provides training, guidance and assistance to property managers, program and regional staff, and collaborates with central office and regional engineering and construction management staff on projects as assigned. Under general direction, exercises considerable individual initiative and independent judgment in carrying out program responsibilities related to reviewing cost estimates and analyzing project documentation for adequate and appropriate justification and implementing the approved projects. This position reports to the Area Engineering Supervisor.

**( Time% ) GOALS AND RESPONSIBILITIES**

**A. ( 40% ) PROVIDE PROJECT MANAGEMENT SERVICES FOR INTERAGENCY MULTIDISCIPLINE PROJECTS**

- A1. [Project] Manage scope, schedule and budget of assigned projects to ensure design and construction are completed in accordance with the approved project request, and in compliance with applicable codes, laws, regulations, and Department Policy and Procedures.
- A2. [Management] Manage, direct and lead teams made up of A/E firms, consultants, contractors, construction management firms, agency representatives and users and other department staff in the successful implementation and completion of projects.
- A3. [Scope] Manage the scope and expectations of the project with the agency program. Deliver cost effective customer focused solutions that meet the needs and requirements of the project.
- A4. [Schedule] Manage, direct and lead the development of the project schedule, including task planning, milestones and critical path. Report on project status, manage project progress, and routinely communicate to the agency program

project progress and schedule. Ensure the project is completed in accordance to agency program expectations. Update project management software (Development Project System – DPS) as directed.

- A5. [Budget] Manage and control the development of the project budget and project expenditures to ensure the project is completed within the authorized budget. Review all project expenditures and payment requests and approve after verifying that completed work meets contract requirements.
- A6. [Reporting] Prepare monthly project reports and status updates to management relative to assigned projects.
- A7. [Contracts] Manage the development of A/E and construction contracts. Lead contract negotiations and enforce contract compliance. Manage, direct, and lead project stakeholders (including the A/E and contractors) to deliver projects to meet Department and programs requirements.
- A8. [Change] Manage project changes by negotiating, documenting, reviewing and approving all changes with project stakeholders and in accordance with Department Policy and Procedures.
- A9. [Approval] Review assigned project requests. Coordinate project requests with agency program to ensure project expectations are fully documented and approved. Modify as needed and make recommendations for the approval of requested projects.
- A10. [Coordination] Collaborate on project management activities within the Section, Bureau and Department to ensure projects are delivered consistently and efficiently under general supervision and according to Department Policy and Procedures.

**B. ( 25% ) PROVIDE CONSTRUCTION ADMINISTRATION AND SUPERVISION ON DELEGATED PROJECTS**

- B1. [Coordination] Schedule and coordinate all necessary communications with all project stakeholders. Ensure all project expectations and desired outcomes are understood throughout the duration of the project. Establish construction schedules and communicate schedule to stakeholders throughout the duration of the project. Schedule routine project coordination meetings as necessary and document decisions and direction with meeting minutes.
- B2. [Program Operations] Establish and maintain communications with agency program personnel for coordination of site and program operations. Coordinate access, shutdowns or closures, safety, and other situations to minimize disruption to program facilities/properties while maintaining construction operations.
- B3. [Inspection] Inspect on-going construction of assigned projects to ensure conformity with approved construction schedules, plans/specifications, approved shop drawings, and with applicable requirements for: barrier-free access, public health and safety code conformance and other pertinent requirements. Develop and document an ongoing deficiency/issues list of construction observations.
- B4. [Contract Operations] Review and approve (as appropriate) contractor schedule of values (cost breakdowns), contract pay requests, construction schedules, and subcontractor lists submitted by contractor.
- B5. [Materials] Review and approve (as appropriate) submitted shop drawings, material specifications, quality control tests of materials and installations, and material samples in conformance to established contract requirements.
- B6. [Issue Resolution] Investigate and work to resolve conflicts during construction. Convene design conflicts and/or questions to Project Designer. Assistance with the interpretation and/or clarification of contract documents. Work to keep all issues within project team resolution responsibility. Coordinate construction sequence with contractors and agency programs.
- B7. [Requests for Information] Prepare written responses to all requests for information (RFI) generated (verbal or written) by the contractor. Distribute responses to project stakeholders.
- B8. [Changed Conditions] Direct contractor(s) to modify or deviate from contract plans and/or specifications in response to unanticipated conditions, or agency program requests. Initiate all project documentation to direct changes (change orders) as necessary to assure that the project is completed in an economical, efficient and timely manner while meeting all expected outcomes.

B9. [Project Close-Out] Make final project inspections, document incomplete or incorrect items, prepare project closeout documents, conduct post-construction meeting, approve final payment request, and recommend close out of project upon satisfactory completion of all work. File all project documents including record documents (plans and specifications), changes to the work, and financial records.

B10.[Document] Prepare, collect, and index all project documentation including: emails, financial records, contract documents, meeting minutes, submittals, shop drawings, review comments, changes to the work, requests for information, and approvals. Electronically archive all documentation on department network server in accordance with department policies.

**C. ( 20% ) PROVIDE DESIGN, BIDDING, AND CONTRACTING ASSISTANCE TO AGENCY PROGRAMS**

C1. [Requirements] Plan and determine the requirements for project specific bidding documents including but not limited to project specification manual and drawings.

C2. [Studies] Prepare engineering and economic feasibility studies, site investigations, and preliminary cost estimates for proposed projects as directed.

C4. [Design] Develop design documents for projects which can be completed more economically in house, where in-house expertise is required, where necessary to meet project schedules, or address emergency situations. Design documents to be sealed and signed by a Registered Professional Engineer, and obtain plan approvals from regulatory authorities were required. Prepare documents based on sound engineering principles and practices, site conditions, applicable policies, procedures, codes, state and national design protocols (WisDOT, FHWA, etc...) and Statutes.

C5. [Drawings] Provide drawings using department provided software that set forth the requirements for construction including but not limited to specific details, materials, products, and finishes.

C6. [Specifications] Provide specifications that present written requirements for materials, equipment, and construction systems as well as standards for products, workmanship, and the construction services required to produce the work. Clearly define divisions of work for the project. Include bidding requirements, contract forms, and conditions of the contract.

C7. [Special Requirements] Identify all special requirements. Recommend modifications to standard documents to meet specific needs of the project. Include all special requirements for any technical section of the specifications.

C8. [Bidding Documents] Provide project specific bidding documents that follow DOA and DNR standards.

C9. [Solicitation of Bids] Seek open public bids for all work to ensure competitive pricing of work and transparent bidding process. Prepare design and construction contracts for all work. Conform to all State laws, policies, and guidelines for bidding and contracting. Document all bidding and contracting steps followed and results.

C10. [Addenda] Provide addenda as required during the bidding process.

C11. [Quality] Coordinate documents to clearly and consistently describe what is to be bid and built. Issue complete contract documents including all necessary details required to bid and complete the construction that will result in a project meeting approved scope, schedule, and budget. Obtain peer and supervisor reviews of documents.

**D. ( 10% ) SERVE AS DEPARTMENT REPRESENTATIVE AND LIASON TO OTHER STATE AGENCIES AND EXTERNAL PARTNERS**

D1. [Agency Representative] Serve as the DNR single-point-of-contact for DOA managed projects. Coordinate with the assigned DOA Project Manager requests for information, document reviews/comments, site access, and resolution of site issues, technical assistance, and project scope management with the agency program. Attend project meetings and represent agency program needs. Solicit and file all project documentation from DOA project team.

D2. [Document] Prepare, collect, and index all project documentation including: emails, financial records, contract documents, meeting minutes, submittals, shop drawings, review comments, changes to the work, requests for

information, and approvals. Electronically archive all documentation on department network server in accordance with department policies or as directed.

- D3. [Communicate] Provide courteous and professional responses on all inquiries from both internal and external contacts seeking information or providing feedback. Review reports, plans and specifications and provide thoughtful and concise feedback as requested.
- D4. [Document Review] Coordinate the formal review of all project documents delivered to the department including studies, pre-design, preliminary design, final design, and bid documents prepared for the department. Coordinate formal review with agency program contacts, department experts, and section leadership. Prepare formal written comments on all documents.
- D5. [Project Requests] Review agency project requests and make recommendations on project need, scope, schedule and budget for submission of requests to DOA. Coordinate all recommendations with supervisor.
- D6. [Construction] Assist and support DOA Construction Representatives in solving construction problems and resolving project conflicts.

#### **E. ( 5% ) PROVIDE TECHNICAL ASSISTANCE**

- E1. [Expert] Serve as technical expert on design and construction issues as well as impacts to other programs.
- E2. [Advice] Provide technical advice to section peers.
- E3. [Liaison] Serve as Department liaison to various state and federal agencies and partner organizations as directed and assigned by supervisor.
- E4. [Best Practices] Provide education and insight to other agency staff on new products, methods and operating procedures to keep them abreast of the latest technology advances.
- E5. [Sustainability] Investigate and evaluate new products, systems and operating methods that will reduce energy demands in DNR buildings. Provide recommendations for improving energy efficiency and encourage energy conservation in all DNR owned facilities.
- E6. [Operations] Assist agency programs in developing reliable operating plans, in resolving operating problems and in the development of operations and maintenance standards
- E7. [Emergency Response] Respond to other agency requests for emergency technical assistance. Provide professional expertise and recommendations in emergency situations to protect public health, safety and state property and develop remedial solutions.
- E8. [Other Duties] Miscellaneous duties as assigned by supervisor.

#### **KNOWLEDGE, SKILLS AND ABILITIES**

##### **Technical Competencies**

- 1. Ability to function effectively on teams and to lead teams.
- 2. Skilled in principles and practices of project management.
- 3. Skilled in principles and practices of construction management.
- 4. Knowledge of effective oral and written communications.
- 5. Ability to effectively manage workload including the ability to multi-task, set priorities and meet deadlines.

6. Skilled in Microsoft Office, with basic knowledge of AutoCAD, Civil 3D and hydraulic/hydrology modeling and design programs.
7. Skilled in administrative management including committee leadership, delegation of work, establishing priorities, program review and control, communications, problem solving, resolving conflict, training, developing and writing long-range management plans, public speaking, writing, and time management.
8. Knowledge of Department budget process, work planning, policy development, rules development, legislation development and Natural Resources Board procedures.

**SPECIAL REQUIREMENTS** – (e.g. license requirements, certifications, registrations, etc.)

Must have a Bachelor of Science Degree in Civil, Civil and Environmental Engineering, or equivalent engineering program from an accredited college or university.

Must be a Registered Professional Engineer in Wisconsin, or Certified Engineer-in-Training who will have passed the State of Wisconsin examination for registration as a Professional Engineer before the end of a six month probationary period, as defined by Wisconsin Statutes Chapter 443.

**PHYSICAL REQUIREMENTS & ENVIRONMENTAL FACTORS**

Sedentary work: Exerting up to 10 lbs. of force occasionally and/or a negligible amount of force about 60% of the time during the course of the year.

Light work: Exerting up to 20 lbs. of force occasionally and/or up to 10 lbs of force frequently, about 25% of the time during the course of the year.

Medium work: Exerting up to 20-50 lbs. of force occasionally to frequently, about 10% of the time during the course of the year.

Heavy work: exerting up to 50-100 lbs. of force occasionally and/or up to 20-50 lbs. of force frequently, less than 5% of the time during the course of the year.

**Physical Activity Requirements**

The position requires bending at the waist, kneeling, crouching, lifting, carrying, pushing, pulling, reaching, handling, fingering, sitting, standing, talking, hearing, seeing (clarity of vision at 23 feet (7 meters) or more, clarity of vision at 19 inches (50 cm) or less, and the ability to distinguish colors), and walking.

**Physical Surroundings and Hazards**

Depending on the time of year, activities occur indoors and outdoors in varying amounts, meaning the incumbent could be exposed to extreme cold (temperatures below 32 degrees for periods of an hour or more), and possibly extreme heat (temperatures above 90 degrees for periods of more than one hour).

Equipment Used: In the performance of duties, the Engineer typically uses computers and office equipment as well as survey equipment including levels, transits, total stations, data collectors and associated equipment.

Telework Evaluation: Telework is normally available on a limited basis due to responsibilities within this position and the need to be available for staff consultation.

## **PD Addendum:**

### Program Level Competencies

- **Communicator**  
Communicates clearly and concisely with colleagues and customers; solicits clarification on policies and assignments as needed; is open to both positive and negative feedback; seeks information to remain informed about work issues.
- **Team Player**  
Maintains a positive attitude; shares expertise and acknowledges it in others; works harmoniously as a team member; resolves conflict in a positive manner; recognizes customer needs and advocates appropriately for them.
- **Innovator**  
Is open minded, flexible and responsive to business improvements and customer needs; asks pertinent questions of the supervisor; solves problems through common sense solutions; knows when to take risks; learns from failure.
- **Learner**  
Is willing to learn skills to improve productivity, technical expertise and customer service; is interested in growth and development and strives to apply knowledge; participates in cross functional teams; pursues training opportunities.
- **Role Model**  
Sets examples of honesty, respect, integrity and humility; displays a positive attitude through respectful, enthusiastic interactions; shows openness, caring and support for others; demonstrates appropriate professionalism.
- **Work Ethic**  
Demonstrates initiative, motivation, commitment and productivity; is dependable and fully engaged in job duties; responds promptly and positively to customer needs; makes decisions within job authority and accepts responsibility.
- **Stewardship**  
Respects duty to wisely use taxpayer resources; works efficiently and makes cost-effective use of funds and assets; recommends economical ways to conduct departmental business; participates in Lean initiatives when available.
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